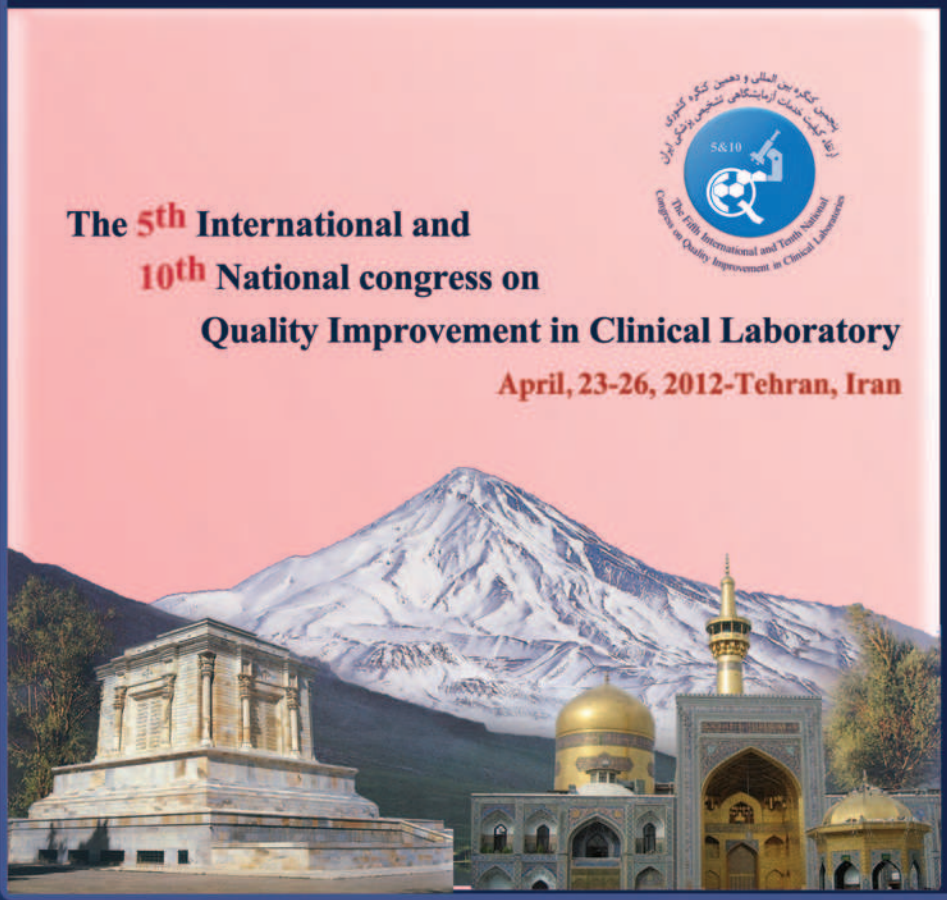
Laboratory & Diagnosis

Official Journal of Iranian Association of Clinical laboratory Doctors

Vol. 3, No. 14, Supplement Issue April 2012

CONGRESS ABSTRACTS



Iranian Association of Clinical Laboratory Doctors

National Reference Laboratory

Iranian Association of Clinical Laboratory Specialists

Antimicrobial resistance pattern of methicillin susceptible (MSSA) and resistant (MRSA) *Staphylococcus aureus* strains isolated from patients admitted to hospitals affiliated to Ardabil University of Medical Sciences

Solmaz Dibah[1], Mohsen Arzanlou[2], Reza Shapouri[1], Elham Jannati[3]

1. Department of Microbiology, School of Biological Science, Zanjan Branch, Islamic Azad University, zanjan, Iran
2. Department of Microbiology, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
3. Department of Microbiology, School of Biological Science, Ardabil Branch, Islamic Azad University, Ardabil, Iran

Background and Aim:
Today treatment of infections caused by MRSA is a major therapeutic challenge. Infections caused by MRSA strains are associated with higher mortality and morbidity. This study was aimed to find the frequency of *Staphylococcus aureus* strains isolated from clinical specimens and evaluate their antimicrobial resistance profile.
Methods:
In this cross-sectional study a total of 41 clinical *Staphylococcus aureus* isolates from different specimens were included. The oxacillin resistance were evaluated using two category of methods: Agar dilution (determination of oxacillin MIC), and PCR (detection of mecA gene). Antimicrobial resistance pattern were determined using disk diffusion methods. The results were interpreted according to CLSI.
Results:
The results identified 19 (46.34%) out of 41 *S. aureus* isolates as methicillin resistant. The oxacilin MICs against MRSA were between 64- 512 ≥µg/ml and for MSSA isolates were between ≤ 0.25-1µg/ml. MRSA isolates were resistant against most antibiotics. The chloramphenicol, imipenem and co-trimoxazole showed to be the most effective antibiotics against MRSA isolates. PCR revealed mecA gene in all isolates determined as MRSA in Agar dilution method.
Conclusions:
In this study frequency of MRSA strains was 46.34%. Treatment based on antibiogram test results and rational antibiotics therapy can prevent increase in the number of resistant species.

Keywords: MRSA;Oxacillin MIC; mecA, Antimicrobial resistance pattern

Corresponding Author:
Mohsen Arzanlou: m.arzanlou@ arums.ac.ir